REMARKS

This preliminary amendment presents a substitute specification, an amended abstract, and a new set of claims for examination.

A marked-up version of the substitute specification, showing additions to the translation by underlining and deletions from the translation by strike-through, is attached as Appendix III. The substitute specification includes no new matter.

Respectfully submitted,

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VEHICLE SEAT WITH BACK REST

[0001] ~~The~~ This invention relates to a vehicle seat ~~as defined in the preamble of claim 1~~.

[0002] Such a vehicle seat is known from German publication DE 199 49 728 A1. The vehicle seat which is shown there is mounted displaceably in a vehicle by means of rails. It has a ~~drag rest~~ backrest, which is guided in a sliding block guide.

[0003] In modern vehicles, the construction space is often very limited. In the rear, in particular, space is very cramped and is often additionally blocked by installations and coverings and is inaccessible. Nevertheless, a vehicle seat must be able to be connected rapidly and securely to the vehicle. For reasons of space and/or time, known connecting methods, such as, for example, screwing the backrest to a rear wall, are not economically feasible.

[0004] The object of the present invention is to provide a vehicle seat with ~~drag rest~~ a backrest, which is of compact configuration and, at the same time, can be easily and quickly fitted. In particular, the vehicle seat should be able to be securely connected to the vehicle structure.

[0005] This object is achieved according to the invention ~~by a vehicle seat according to the features of claim 1~~.

[0006] The vehicle seat has a releasable locking mechanism, which is configured for the securement of the ~~drag rest~~ backrest in a sliding block guide.

The locking mechanism can be operated, i.e. locked or unlocked, manually. If the locking mechanism is unlocked, the ~~drag rest~~ backrest can be easily installed in a vehicle and can be fastened there by operation of the locking mechanism. Simple removal of the vehicle seat, e.g. for maintenance or repair works, is also possible. For this, the locking mechanism of the ~~drag rest~~ backrest is released manually, whereupon the seat, preferably the ~~drag rest~~ backrest, is easily removable from the vehicle.

[0007] In one embodiment, it is envisaged that the ~~drag rest~~ backrest is guided in a sliding block guide, which is connected to the vehicle structure and has two slideways. On each side of the ~~drag rest~~ backrest, a slideway is provided. The locking mechanism of the ~~drag rest~~ backrest engages in the slideways with two bolts and in this way connects the ~~drag rest~~ backrest to the vehicle structure. The ~~drag rest~~ backrest is thus on both sides firmly and securely anchored and supported in the slideways by the bolts of the locking mechanism and, at the same time, guided displaceably in ~~said~~ the slideways.

[0008] It is envisaged that the ~~drag rest~~ backrest, in one embodiment, has a tube running transversely to the ~~drag rest~~ backrest and supporting the bolts of the locking mechanism. The tube is preferably configured such that it passes right across the width of the ~~drag rest~~ backrest and is connected to a bearing structure of the ~~drag rest~~ backrest, preferably the frame of the ~~drag rest~~ backrest. The bolts of the locking mechanism can be mounted in the tube in an axially displaceable manner.

[0009] By means of a draw band which cooperates with the bolts and is manually operated, or a chain, the bolts can be axially displaced and hence disengaged from the slideways in order ~~as~~ to anchor the ~~drag rest~~ backrest in engagement with the slideways and/or release the ~~drag rest~~ backrest.

[0010] In an advantageous embodiment, it is envisaged that the draw band and/or the chain is configured to indicate the correct locking position of the ~~drag rest~~ backrest. For this, the chain and/or the draw band can have a marking, which, in the locked position of the bolts, coincides with a marking fixedly disposed on the vehicle seat. If the vehicle seat or the ~~drag rest~~ backrest has not been properly locked, then the bolts cannot be extended into their end position by means of the draw band and/or the chain and the marking on the chain and/or the draw band fails to coincide with the marking on the seat.

[0011] ~~One~~ According to one embodiment ~~envisages that,~~ the marking on the draw band is configured as a hook and/or eyelet and/or shackle. The marking fixedly disposed on the vehicle seat is accordingly configured as a pin and/or hook, so that, if the ~~drag rest~~ backrest is correctly locked, the draw band and/or the chain can be hung from the seat, preferably can be fixed thereto, by joining up the markings.

[0012] It is possible to use the vehicle seat according to the invention in passenger vehicles, buses and water craft or rail vehicles. Use of the vehicle seat according to the invention as a comfortable passenger chair in aircraft is also envisaged.

[0013] Further features and embodiments of the invention can be derived from the claims, the figures and the description of the figures. The aforementioned and below-stated features and combinations of features can be used not only in the respectively indicated combination but also in isolation, without departing from the scope of the invention.

[0014] Further embodiments of the invention are represented and explained in the ~~drawings, in which:~~ drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] ~~figure 1:~~ Figure 1 shows a vehicle seat with ~~drag rest~~ backrest and locking mechanism in schematic side view,

[0016] ~~figure 2:~~ Figure 2 shows a representation of the opened locking mechanism,

[0017] ~~figure 3:~~ Figure 3 shows a representation of the locked locking mechanism,

[0018] ~~figure 4:~~ Figure 4 shows a perspective representation of the locked locking mechanism,

[0019] ~~figure 5:~~ Figure 5 shows an enlarged representation of the bolt of the locking mechanism,

[0020] ~~figure 6:~~ Figure 6 shows a representation of the hanging of the draw band in the top of the vehicle seat, and

[0021] ~~figure 7:~~ Figure 7 shows a representation of the hanging of the draw band in the bottom of the vehicle seat.

DETAILED DESCRIPTION OF THE INVENTION

[0022] Figure 1 shows a vehicle seat 1 having a ~~drag rest~~ backrest 2 and a seat cushion 11. The vehicle seat 1 is mounted displaceably in a vehicle by means of rails 12. The contour of the padding of ~~drag rest~~ the backrest and seat cushion is indicated with hatching. The ~~drag rest~~ backrest 2 has an upholstered backrest frame 21 and is mounted displaceably in a sliding block guide 22, with slideways 23, which is fastened in the vehicle. In addition, the ~~drag rest~~ backrest 2 is connected to the seat cushion and the rails 12, e.g. hung or inserted, such that it is pivotable and easily detachable.

[0023] Through displacement in the vehicle of the seat cushion 11, guided displaceably in the rails 12, the backrest 2 hinge-connected to the seat cushion 11 is displaced in its lower region likewise in the direction of the seat cushion 11. As a result of the guidance of the backrest 2 in the slideways 23, the height and angle of the ~~drag rest~~ backrest 2 are altered by the adjustment of the seat cushion 11. The seat occupant can thus freely choose and/or adjust his seating position between a rather upright seating position and a rather angled rest position.

[0024] By means of a locking mechanism 3, represented in greater detail in ~~figures~~ Figures 2 to 5, the ~~drag rest~~ backrest 2 is detachably connected to the vehicle-fixed sliding block guide 22. The locking mechanism is disposed approximately halfway up the ~~drag rest~~ backrest 2 and is symmetrical in structure. It comprises a transverse tube 31 and two bolts 34, engaging in the slideways 23 disposed to the left and right of the backrest 2, as well as a centrally running draw band 33, connected to the bolts 34 by levers 32.

[0025] The transverse tube 31 runs transversely to the ~~drag rest~~ backrest 2 and is connected fixedly to the backrest frame 21. It supports the two bolts 34 in an axially displaceable manner in a long hole, the bolts 34 being displaceable beyond the open ends of the transverse tube 31. The backrest frame 21 has two side members joined together at their one front face, so that the cross section of the backrest frame is of approximate U-shaped configuration. In the space between the two side members of the backrest frame 21, the sliding block guide 22 engages on both sides of the backrest at the level of the transverse tube 31. The inner side member of the backrest frame 21 is connected to the transverse tube 31 and has an opening through which the bolt 34 can reach. Disposed in alignment with this opening is the opening in the slideway 23 and an opening in the second side member of the backrest frame 21.

[0026] As represented in ~~figure~~ Figure 3 or Figure 4, if the locking mechanism 3 is locked, the bolt 34 disposed on both sides of the ~~drag rest~~ backrest 2 reaches through the ~~slipway~~ slideway 23 and back-grips the opening

in the outer side member of the backrest frame 21. The locking mechanism 3 in this way secures the ~~drag rest~~ backrest 2 firmly in the vehicle. If the locking mechanism 3 is unlocked, the bolts 34, as represented in ~~figure~~ Figure 2, are fully withdrawn into the transverse tube 31 and are disengaged from the ~~slipways~~ slideways 23, so that the ~~drag rest~~ backrest 2 is easily removable from the vehicle.

[0027] The two levers 32 are rotatably connected at their one end to a respective bolt 34. At their other end, the levers 32 are joined rotatably together and connected to the draw band 33. The draw band runs along behind the vehicle seat 1 and is accessible on the top side of the backrest 2 from above and on the seat cushion 11 from below. It can be operated manually. For locking purposes, the draw band 33 can be drawn downward, whereby the bolts 34 are displaced outward by means of the levers 32. A stop 35 herein limits the downward travel of the draw band 33 and is arranged such that, in the locked setting, the levers 32, beyond the mid-position of precisely 180°, stand at a shallow angle to each other. Any play in the locking mechanism 3 is thereby compensated and a stable locking position obtained. In the unlocking process, the draw band 33 is drawn upward. By means of the levers 32, the bolts 34 are displaced inward and release the ~~drag rest~~ backrest 2.

[0028] Over the path of the draw band 33, the locking of the ~~drag rest~~ backrest 2 is able to be checked. If the ~~drag rest~~ backrest is correctly positioned, then the draw band 33 is drawn downward from the setting shown in ~~figure~~

Figure 2 into the setting shown in ~~figures~~ Figures 3 and 4. If the ~~drag rest~~ backrest 2, for example, is not correctly positioned or if one of the openings cannot be passed through freely, then the levers 32 cannot be operated into the locking end position. The path covered by the draw band is thus smaller. As represented in ~~figure~~ Figure 6 or Figure 7, the draw band 33 has a shackle 36, which is disposed on the draw band at such a measurement-defined location that it can be hung in a pin 37 disposed on the seat frame 21 only if the ~~drag rest 12~~ backrest 2 is correctly locked. In cooperation with the pin 37, this marking in the form of the shackle 36 allows the correct locking of the ~~drag rest~~ backrest 2 to be checked, in spite of the locking mechanism 3 not being visible.

[0029] In order to prevent the locking mechanism 3 from being accidentally opened, the draw band 33, on the pin 37, is protected from slipping off. As shown in ~~figure~~ Figure 7, the pin 37 has a check nut 38, which prevents accidental release of the draw band 33. After the draw band 33 has been hung, the check nut 38 is screwed onto the pin 37, so that the draw band 33 cannot detach accidentally from the pin 37.

~~Abstract~~ ABSTRACT OF THE DISCLOSURE

~~The invention relates to a~~ A vehicle seat ~~(1) having~~ has a ~~drag rest (2). The drag rest (2)~~ backrest which is mounted displaceably in the vehicle by ~~means of~~ a sliding block guide ~~(22)~~. In order to enable a vehicle seat of compact configuration to be easily fitted, ~~it is envisaged that~~ the ~~drag rest (2)~~ backrest has a locking mechanism ~~(3)~~ which secures the ~~drag rest (2)~~ backrest releasably in the sliding block guide ~~(22)~~.

~~(Figure 1)~~